IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:	Confirmation Number: **4886**
Thiel, James	Group Art Unit: **2644**
Serial No.: **10/685,034**	Examiner: **Chau, Corey P.**
Filed: **October 14, 2003**	Docket No.: **252004-1031**

For: **System and Method for Adjusting the Low-Frequency Response of a Crossover that Supplies Signal to Subwoofers in Response to Main-Speaker Low-Frequency Characteristics**

AMENDMENT AND RESPONSE TO OFFICE ACTION

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
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Sir:

In accordance with 37 C.F.R. §1.114, a Request for Continued Examination is filed concurrently with this response to the Final Office Action so that the Final Office Action mailed December 19, 2005, is now effectively made non-final. Reconsideration and allowance of the application and presently pending claims, as amended, are respectfully requested.

AUTHORIZATION TO DEBIT ACCOUNT

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to deposit account no. 20-0778.

AMENDMENTS

In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:

a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ~~being purely indicative of an intrinsic characteristic~~ indicating a low-frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and

a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variable.

2. (Canceled)

3. (Canceled)

4. (Previously Presented) The system of claim 1, wherein the user adjustable variable comprises a low-frequency damping factor.

5. (Previously Presented) The system of claim 1, wherein the user adjustable variable comprises a speaker sensitivity factor.

6. (Previously Presented) The system of claim 1, wherein the user adjustable variable comprises an enclosure type.

7. (Previously Presented) The system of claim 1, wherein the user adjustable variable comprises a gain factor.

8. (Currently Amended) A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:

receiving at least a user-adjustable setting, the user-adjustable setting ~~being purely indicative of an intrinsic characteristic~~ indicating a low-frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and

producing a desired subwoofer signal in response to receiving the user-adjustable setting.

9. (Canceled)

10. (Canceled)

11. (Previously Presented) The method of claim 8, wherein the main speaker characteristic comprises a low-frequency damping factor.

12. (Previously Presented) The method of claim 8, wherein the main speaker characteristic comprises a speaker sensitivity factor.

13. (Previously Presented) The method of claim 8, wherein the main speaker characteristic comprises an enclosure type.

14. (Previously Presented) The method of claim 8, wherein the main speaker characteristic comprises a gain factor.

15. (Currently Amended) A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:

means for receiving at least one user-adjustable setting, the user-adjustable setting ~~being purely indicative of an intrinsic characteristic~~ indicating a low frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input;

means for receiving an input signal; and

means for producing a desired subwoofer signal from the input signal in response to the user adjustable setting.

16. (Canceled)

17. (Canceled)

18. (Previously Presented) The system of claim 15, wherein the means for producing the desired subwoofer signal further comprises means for setting a user-adjustable variable that indicates a low-frequency damping factor of the main speaker.

19. (Previously Presented) The system of claim 15, wherein the means for producing the desired subwoofer signal further comprises means for setting a user-adjustable variable that indicates a gain of the main speaker.

20. (Currently Amended) A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:

a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising:

a first variable that ~~is purely indicative of an intrinsic characteristic~~ indicates a low frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and

a second variable that is not purely indicative of a main speaker characteristic; and

a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variables.

21. (Canceled)

22. (Canceled)

23. (Previously Presented) The system of claim 20, wherein the user adjustable variables comprise a low-frequency damping factor.

24. (Previously Presented) The system of claim 20, wherein the user adjustable variables comprise a speaker sensitivity factor.

25. (Previously Presented) The system of claim 20, wherein the user adjustable variables comprise an enclosure type.

26. (Previously Presented) The system of claim 20, wherein the user adjustable variables comprise a gain factor.

27. (Currently Amended) A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:

receiving user adjustable settings, the user adjustable settings comprising:

a setting that ~~is purely indicative of an intrinsic characteristic~~ indicates a low frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and

a setting that is not purely indicative of a main speaker characteristic; and

producing a desired subwoofer signal in response to receiving the user adjustable settings.

28. (Canceled)

29. (Canceled)

30. (Previously Presented) The method of claim 27, wherein the main speaker characteristic comprises a low-frequency damping factor.

31. (Previously Presented) The method of claim 27, wherein the main speaker characteristic comprises a speaker sensitivity factor.

32. (Previously Presented) The method of claim 27, wherein the main speaker characteristic comprises an enclosure type.

33. (Previously Presented) The method of claim 27, wherein the main speaker characteristic comprises a gain factor.

34. (Currently Amended) A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:

means for receiving user adjustable settings, the user-adjustable settings comprising:

a setting that ~~is purely indicative of an intrinsic characteristic~~ indicates a low frequency cutoff frequency of the main speaker, wherein the ~~intrinsic characteristic~~ low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and

a setting that is not purely indicative of a main-speaker characteristic;

means for receiving an input signal; and

means for producing a desired subwoofer signal from the input signal in response to the plurality of user adjustable setting.

35. (Canceled)

36. (Canceled)

37. (Previously Presented) The system of claim 34, wherein the means for producing the desired subwoofer signal further comprises means for setting a user-adjustable variable that indicates a low-frequency damping factor of the main speaker.

38. (Previously Presented) The system of claim 34, wherein the means for producing the desired subwoofer signal further comprises means for setting a user-adjustable variable that indicates a gain of the main speaker.

REMARKS

This is a full and timely response to the outstanding final Office Action mailed December 19, 2005. Upon entry of the amendments in this response, claims 1, 4 – 7, 11 – 14, 18 – 19, 23 – 26, 30 – 33, and 37 – 38 remain pending. In particular, Applicant amends claims 1, 8, 15, 20, 27, and 34 and cancels claims 2 – 3, 9 – 10, 16 – 17, 21 – 22, 28 – 29, and 35 – 36. Applicant cancels claims 2 – 3, 9 – 10, 16 – 17, 21 – 22, 28 – 29, and 35 – 36 merely to reduce the number of disputed issues and to facilitate early allowance and issuance of other claims in the present application. Applicant reserves the right to pursue the subject matter of these canceled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate the canceled subject matter to the public. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

I. Rejections Under 35 U.S.C. §112

The Office Action indicates that claims 1, 3 – 8, 10 – 15, 17 – 20, 22 – 27, 29 – 34, and 36 – 38 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More specifically, the Office Action asserts that "Applicant has not clearly disclosed how adjustable variable such as a low-frequency cutoff frequency, low-frequency dampening factor, a speaker sensitivity factor, an enclosure type, and a gain factor are different from equalization parameters" (OA p. 3, line 12). As indicated in "Exhibit A" from the previous response,

> In prior art[,] the equalizer's response is controlled by user adjustable variables (knobs or other settings) that describe the ***response of the equalizer itself***. The user adjustments may include those that select the type of response

> (lowpass, highpass, parametric, etc), the characteristic frequency, Q, gain, and possibly other variables. In all cases the user adjustments are describing the ***equalizer's frequency response characteristics*** and do not describe the response of the device that the equalizer is being used with. For example, if the user sets an equalizer variable control to 40Hz, this controls a characteristic ***of the equalizer's response***; it does not describe that the speaker whose response is being equalized has a 40Hz characteristic. Further, in subwoofer crossover applications, the user adjustable settings do not describe anything about the response of the main speakers that the subwoofer system is being used with. (***emphasis added*** – p. 6)... The present application concerns a device that implements a new method for user control of the equalizer's response characteristics. The novelty is that the equalizer's user adjustable variables ***do not describe the equalizer's response***, as in all prior art, but rather describe ***intrinsic characteristics of a loudspeaker***. Using this different type of information, the device automatically configures its operation to provide response characteristics, which are not described by the user adjustable variables. In particular, the information inputted into the device through the user adjustable variables that is descriptive of the intrinsic characteristics of the main speakers can include for example, the main speaker's enclosure type (the box the speaker driver unit is mounted into), the main speaker's low frequency cutoff frequency, the main speaker's low frequency damping factor and the speaker's sensitivity factor. This information is descriptive of main loudspeaker intrinsic characteristics and not descriptive of the equalizer's response.

(*Emphasis added* – p. 8)

Applicant respectfully submits that the present application describes these features such that one of ordinary skill in the art would understand. As such, Applicant respectfully requests withdrawal of the 35 U.S.C. §112 rejection and submits that the currently pending claims are in condition for allowance.

II. Rejections Under 35 U.S.C. §102

A proper rejection of a claim under 35 U.S.C. §102 requires that a single cited art reference disclose each element of the claim. *See, e.g.*, *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983).

A. Claims 1 – 38 are Patentable Over *Ballard*

1. Claim 1 is Patentable Over *Ballard*

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 1 recites:

> 1. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variable.

(Emphasis added)

Applicant respectfully submits that claim 1, as mended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems... comprising... a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 1, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface… [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 1, as amended. For at least this reason, Applicant submits that claim 1, as amended, is allowable over the cited art.

2. Claim 8 is Patentable Over *Ballard*

The Office Action indicates that claim 8 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 8 recites:

> 8. A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:
>
> receiving at least a user-adjustable setting, the user-adjustable setting ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> producing a desired subwoofer signal in response to receiving the user-adjustable setting.

(Emphasis added)

Applicant respectfully submits that claim 8, as amended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "method for adjusting the frequency response of subwoofer systems… comprising the steps of… receiving at least a user-adjustable setting, the user-adjustable setting ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 8, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface… [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "receiving at least a user-adjustable setting, the user-adjustable setting ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 8, as amended. For at least this reason, Applicant submits that claim 8, as amended, is allowable over the cited art.

3. Claim 15 is Patentable Over *Ballard*

The Office Action indicates that claim 15 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 15 recites:

> 15. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input;
>
> means for receiving an input signal; and
>
> means for producing a desired subwoofer signal from the input signal in response to the user adjustable setting.

(Emphasis added)

Applicant respectfully submits that claim 15, as amended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems... comprising... means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 15, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface... [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a***

low frequency cutoff frequency of the main speaker, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 15, as amended. For at least this reason, Applicant submits that claim 15, as amended, is allowable over the cited art.

4. Claim 20 is Patentable Over *Ballard*

The Office Action indicates that claim 20 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 20 recites:

> 20. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising:
>
> a first variable that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a second variable that is not purely indicative of a main speaker characteristic; and
>
> a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variables.

(Emphasis added)

Applicant respectfully submits that claim 20, as amended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems... comprising... a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising... a first variable that ***indicates a***

low frequency cutoff frequency of the main speaker, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 20, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface… [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "first variable that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 20, as amended. For at least this reason, Applicant submits that claim 20, as amended, is allowable over the cited art.

5. Claim 27 is Patentable Over *Ballard*

The Office Action indicates that claim 27 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 27 recites:

> 27. A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:
>
> receiving user adjustable settings, the user adjustable settings comprising:

> a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a setting that is not purely indicative of a main speaker characteristic; and
>
> producing a desired subwoofer signal in response to receiving the user adjustable settings.

(Emphasis added)

Applicant respectfully submits that claim 27, as amended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "method for adjusting the frequency response of subwoofer systems… comprising the steps of… receiving user adjustable settings, the user adjustable settings comprising… a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 27, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface… [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 27, as amended. For at least this reason, Applicant submits that claim 27, as amended, is allowable over the cited art.

6. Claim 34 is Patentable Over *Ballard*

The Office Action indicates that claim 34 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 34 recites:

> 34. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> means for receiving user adjustable settings, the user-adjustable settings comprising:
>
> a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a setting that is not purely indicative of a main-speaker characteristic;
>
> means for receiving an input signal; and
>
> means for producing a desired subwoofer signal from the input signal in response to the plurality of user adjustable setting.

(Emphasis added)

Applicant respectfully submits that claim 34, as amended, is allowable for at least the reason that *Ballard* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems… comprising… means for receiving user adjustable settings, the user-adjustable settings comprising… a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 34, as amended.

While the Office Action asserts that *Ballard* "discloses the user adjustable variable comprises a low frequency cutoff frequency (FIG. 6; column 9, lines 5 – 15)" (p. 5, element 15), Applicant respectfully disagrees. Applicant respectfully submits that *Ballard* appears to disclose user settings that describe the frequency response of the equalizer. More specifically, *Ballard* discloses a "Graphic User Interface… [that is] readily adapted for the design of other signal characteristic modifications" (col. 9, line 5). Applicant submits that this is vastly different than a "a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 34, as amended. For at least this reason, Applicant submits that claim 34, as amended, is allowable over the cited art.

7. Claims 4 – 7, 11 – 14, 18 – 19, 23 – 26, 30 – 33, and 37 – 38 are Patentable Over *Ballard*

The Office Action indicates that claims 4 – 7, 11 – 14, 18 – 19, 23 – 26, 30 – 33, and 37 – 38 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent Number 5,617,480 ("*Ballard*"). Applicant respectfully traverses this rejection on the grounds that *Ballard* does not disclose, teach, or suggest all of the claimed elements. More specifically, dependent claims 4 – 7 are believed to be allowable for at least the reason that these claims depend from allowable independent claim 1. Dependent claims 11 – 14 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 8. Dependent claims 18 – 19 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 15. Dependent claims 23 – 26 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 20. Dependent claims 30 – 33 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 27. Dependent claims 37 – 38 are believed to be allowable for at least the reason that these claims depend from allowable independent claims 34. *In re Fine*, *Minnesota Mining and Mfg.Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002).

B. Claims 1, 8, 15, 20, 27, and 34 are Patentable Over *Kitamura*

1. Claim 1 is Patentable over *Kitamura*

The Office Action indicates that claim 1 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 1 recites:

> 1. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variable.

(Emphasis added)

Claim 1, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems… comprising… a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main***

speaker, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 1, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system… this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel… and to select the speaker type such as a particular speaker model number and manufacturer…" (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does not disclose "a user interface configured to receive at least one user-adjustable variable, the user-adjustable variable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 1, as amended. For at least this reason, Applicant respectfully submits that claim 1, as amended, is allowable over the cited art.

2. Claim 8 is Patentable over *Kitamura*

The Office Action indicates that claim 8 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 8 recites:

> 8. A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:
>
> receiving at least a user-adjustable setting, the user-adjustable setting ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of

> the main speaker that may be obtained with any particular input; and
>
> producing a desired subwoofer signal in response to receiving the user-adjustable setting.

(Emphasis added)

Claim 8, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "method for adjusting the frequency response of subwoofer systems... comprising the steps of... receiving at least a user-adjustable setting, the user-adjustable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 8, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system... this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel... and to select the speaker type such as a particular speaker model number and manufacturer..." (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does not disclose "receiving at least a user-adjustable setting, the user-adjustable ***indicating a low-frequency cutoff frequency of the main speaker***, wherein the low-frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 8, as amended. For at least this reason, Applicant respectfully submits that claim 8, as amended, is allowable over the cited art.

3. Claim 15 is Patentable over *Kitamura*

The Office Action indicates that claim 15 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 15 recites:

> 15. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input;
>
> means for receiving an input signal; and
>
> means for producing a desired subwoofer signal from the input signal in response to the user adjustable setting.

(Emphasis added)

Claim 15, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems… comprising… means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 15, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system… this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel… and to select the speaker type such as a particular speaker model number and manufacturer…" (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does not disclose "means for receiving at least one user-adjustable setting, the user-adjustable setting ***indicating a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 15, as amended. For at least this reason, Applicant respectfully submits that claim 15, as amended, is allowable over the cited art.

4. Claim 20 is Patentable over *Kitamura*

The Office Action indicates that claim 20 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 20 recites:

> 20. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising:
>
> a first variable that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a second variable that is not purely indicative of a main speaker characteristic; and
>
> a compensation circuit configured to produce a desired subwoofer signal from an input signal in response to the user-adjustable variables.

(Emphasis added)

Claim 20, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems... comprising... a user interface configured to receive user-adjustable variables, the user-adjustable variables comprising... a first variable that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 20, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system... this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel... and to select the speaker type such as a particular speaker model number and manufacturer..." (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does not disclose "a first variable that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 20, as amended. For at least this reason, Applicant respectfully submits that claim 20, as amended, is allowable over the cited art.

5. Claim 27 is Patentable over *Kitamura*

The Office Action indicates that claim 27 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 27 recites:

> 27. A method for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the method comprising the steps of:
>
> receiving user adjustable settings, the user adjustable settings comprising:
>
> a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a setting that is not purely indicative of a main speaker characteristic; and
>
> producing a desired subwoofer signal in response to receiving the user adjustable settings.

(Emphasis added)

Claim 27, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "method for adjusting the frequency response of subwoofer systems… comprising the steps of… receiving user adjustable settings, the user adjustable settings comprising… a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 27, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system… this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel… and to select the speaker type such as a particular speaker model number and manufacturer…" (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does not disclose "a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 27, as amended. For at least this reason, Applicant respectfully submits that claim 27, as amended, is allowable over the cited art.

6. Claim 34 is Patentable over *Kitamura*

The Office Action indicates that claim 34 stands rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent Number 6,674,864 ("*Kitamura*"). Applicant respectfully traverses this rejection on the grounds that *Kitamura* does not disclose, teach, or suggest all of the claimed elements. More specifically, claim 34 recites:

> 34. A system for adjusting the frequency response of subwoofer systems, wherein the subwoofer systems include a main speaker and a subwoofer, wherein the subwoofer is distinct from the main speaker, the system comprising:
>
> means for receiving user adjustable settings, the user-adjustable settings comprising:
>
> a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input; and
>
> a setting that is not purely indicative of a main-speaker characteristic;
>
> means for receiving an input signal; and
>
> means for producing a desired subwoofer signal from the input signal in response to the plurality of user adjustable setting.

(Emphasis added)

Claim 34, as amended, is believed to be allowable for at least the reason that *Kitamura* fails to disclose, teach, or suggest a "system for adjusting the frequency response of subwoofer systems... comprising... means for receiving user adjustable settings, the user-adjustable settings comprising... a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 34, as amended. More specifically, *Kitamura* appears to disclose that "a user of the adaptive speaker compensation system 10 obtains the library of the filter coefficients corresponding to the speaker response characteristic data for the plurality of speakers in the audio system... this is done through the interface of the coefficient library unit computer to allow a user to select a channel such as left channel... and to select the speaker type such as a particular speaker model number and manufacturer..." (col. 4, beginning line 21). As clearly illustrated in this passage, *Kitamura* does disclose "a setting that ***indicates a low frequency cutoff frequency of the main speaker***, wherein the low frequency cutoff frequency is independent of output of the main speaker that may be obtained with any particular input" as recited in claim 34, as amended. For at least this reason, Applicant respectfully submits that claim 34, as amended, is allowable over the cited art.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested.

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Further, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known for at least the specific and particular reason that the Office Action does not include specific factual findings predicated on sound technical and scientific reasoning to support such conclusions.

If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

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